

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342620010-2

POSTLER, Ladislav, inz.

Combined operation of connectors with switching devices.
Energetika Cz ll no.4:191 Ap '61.

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342620010-2"

Postler, L.

621.306.823 ; 621.315.1

✓ 2240. RADIO INTERFERENCE CAUSED BY VERY HIGH-VOLTAGE LINES. L. Postler.

Slaboproudý Obzor, Vol. 16, No. 11, 776-9 (1957). In Czech.

Methods of measuring interference due to transmission-line voltages of up to 400 kV are outlined, some measuring instruments are briefly described, and some experimental results obtained by workers in various countries are given. In particular, curves relating the amplitude of the interference voltage to: (1) the line voltage, (2) frequency, (3) relative atmospheric humidity, (4) rain intensity, and (5) distance of the measuring instrument from the line, are shown.

R.S. Sidorowicz //

POSTLER, L.

Some remarks on the consumption of electricity in electric-power plants. p. 149.
Report on the plenary meeting of the Committee on Electric Power in Geneva. p. 151

ENERGETIKA. (Ministerstvo energetiky a ceskoslovenska vedecka technicka spolecnost
pro energetiku pri Ceskoslovenske akademii ved)
Praha, Czechoslovakia
Vol. 5, no. 4, Apr. 1955

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 11
Nov. 1959
Uncl.

POSTLER, Ladislav, inz.

Insertion of large electric power blocks into the system, and
the control of their current breakers. El tech obzor 51 no.7:
319-324 J1 '62.

POSTLER, L.

Twenty years of manufacturing Czechoslovak carrier-frequency telephone equipment for power-transmission networks. P 777

SLABOPROUDY OBZOR (Ministerstvo vscobenibo strojirenstvi, Ministerstvo spoju a Ceskoslovenska vedecko-technicka spolecnost, sekce elektrotechnika) Praha, Czechoslovakia, Vol. 20, no. 12 Dec. 1959

Monthly List of East European Accessions (EEAI), LC. Vol. 9, no. 2, Feb. 1960

Uncl.

621.318.974

3

8140. PROTECTION OF COMMUNICATION CABLES IN THE
VICINITY OF POWER INSTALLATIONS.

L.Postler and M.Zapletal.

Slaboproudý Obzor, Vol. 19, No. 8, 534-8 (1958). In Czech.

It is shown that communication cables which are laid in the vicinity of a.c. power lines can receive high induced voltages (~ 1.0 kV) during accidental earth faults on the lines. The earthing resistance of the power lines can also produce comparatively high voltages in the cables. The above effects can be reduced by: (1) increasing the distance between cables and lines, (2) decreasing the earthing resistance, (3) employing surge suppressors in the cables and increasing their breakdown strength. Cables laid in the vicinity of d.c. lines are subject to corrosion. This can be minimized either by introducing cathodic protection or by increasing the spacing between cables and lines.

R.S.Sidorowicz

POSTLER, L.

Comparative protections with a high-frequency coupling.

p. 362 (ENERGETIKA) Vol. 6, no. 8, Aug. 1956,
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

POSTLER, L.

Short-circuit experiments in 220 kv systems.

P. 276, (Energetika) Vol. 7, no. 5, May 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Acessions (EEAI) Vol. 6, No. 11 November 1957

POSTIER, I.

Radio interference caused by very high voltage lines.

P. 776. (SLABOPROUDY OBZOR) (Praha, Czechoslovakia) Vol. 18, no. 11, Nov. 1957

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

POSTLER, L.

Electrification of agriculture in the USSR. p. 272.
(Energetika, Vol. 6, no. 6, June 1956. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions. (EEAL) LC. Vol. 6, No. 6,
June 1957. Uncl.

POSTER L.

15985. SELF-SYNCHRONIZATION OF SYNCHRONOUS MACHINES [L. Postler]

Energetika (Prague), Vol. 7, No. 1, 16-21 (1957). In Czech.

A theoretical review of the subtransient, transient and steady-state phenomena of unexcited alternators of different design parameters is given when the alternator is brought up to near synchronous speed and connected to the system. The conditions for the proper self-synchronization are listed as follows: (1) the terminal voltage of the generator should be less than 0.2 per unit; (2) the frequency variance should be between ±3-5%; (3) the excitation should be provided simultaneously with the throwing of the main switch; (4) the voltage regulator and excitation forcing should be connected immediately after the main switch is operated. Self-synchronization schemes and the general rules for operation of these in the U.S.S.R. are given. Oscillograms of successful self-synchronization tests completed in Czechoslovak power stations using an automatic relay type PHS are reproduced.

E. Erdelyi

2

PSS

POSTLER, L.

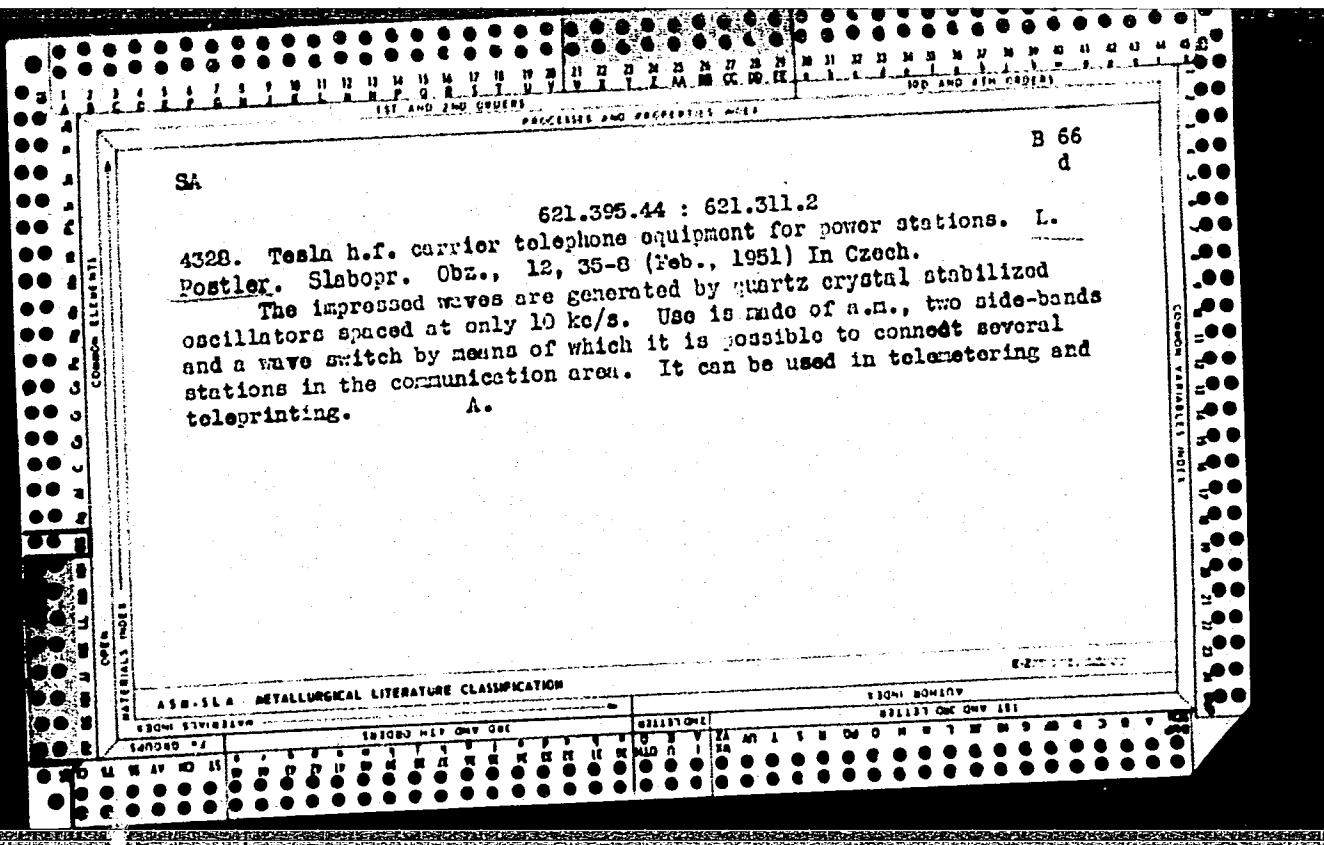
6039. SHORT CIRCUIT TESTS ON A 220 kV SYSTEM. 29

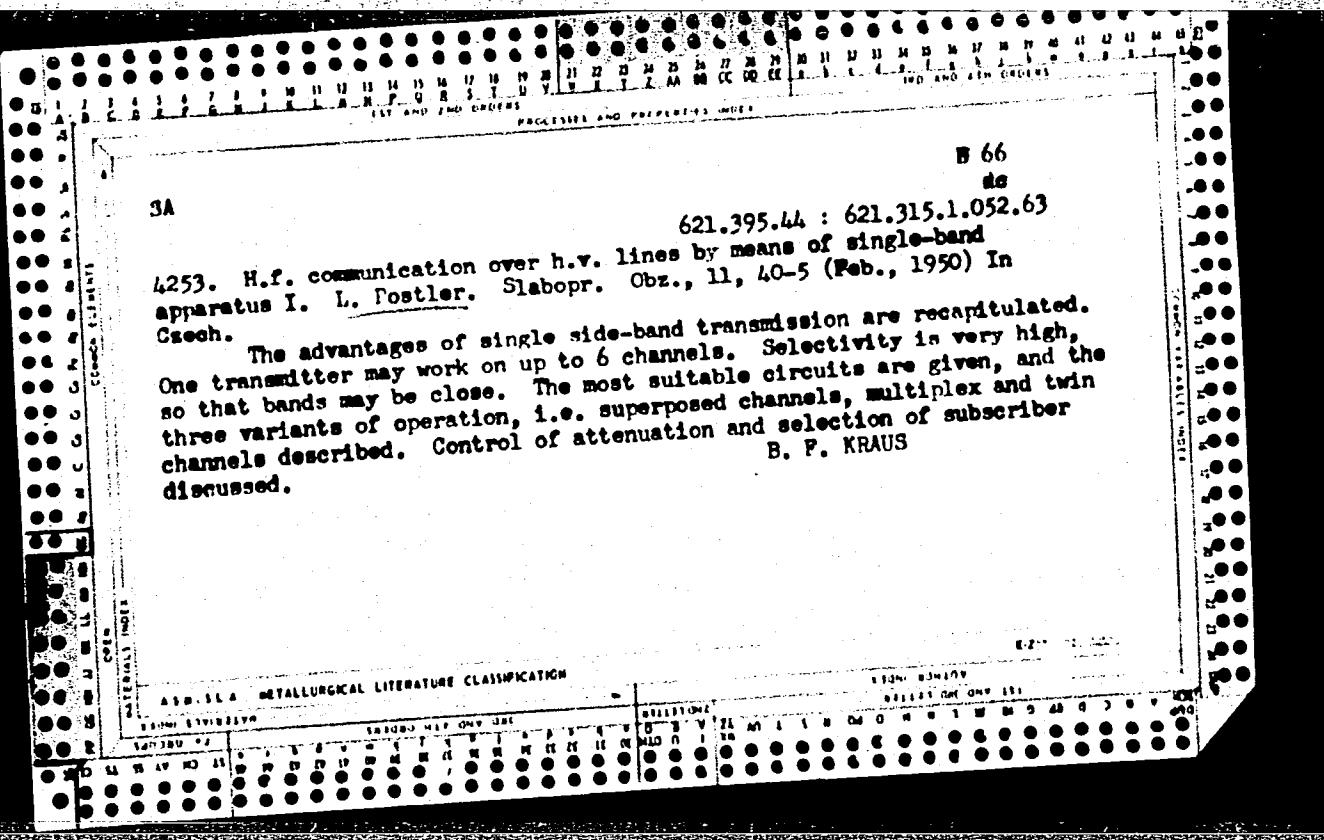
Edited by L. Postler

Energetika (Prague), Vol. 7, No. 5, 276-83 (1957). In Czech.
Report on short circuit tests carried out on a Czechoslovak
220 kV supply system. Short circuit current, recovery voltage,
wave front steepness and the influence of arcing on the operation of
high frequency carrier equipment were measured during normal
operation of the grid. Recovery voltage of 770 kV was measured
while an automatic recloser was operating. The results of the tests
are summarized as follows: (1) high-frequency interference occurs
only during the start and a clearance of arcs. It does not occur
during short circuits; (2) the interference is of short duration at the
start, and of longer duration at the clearance of the fault; (3) the
interference may cause the failure of protective equipment with high
frequency coupling.

E. Erdelyi

ppm





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CIA-RDP86-00513R001342620010-2

PCSTLER, L., inz.; PAVLICEK, Z., inz.

The 14th meeting of the Electric Power Committee in Geneva,
1956. Energetika Cz 7 no.2:121-123 F '57.

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342620010-2"

POSTLER, Ladislav, inz.

Endangering the communication cables by power system operations.
Slaboproudý obzor 23 no.8:453-458 Ag '62.

1. Organizace pro racionalizaci energetickych zavodu, n.p.,
Praha.

POSTLER, L.

"Automation of the power industry."

p. 171 (Automatisace, no. 6, June 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 9,
September 1958

POSTLER, L.

"Development of the Bulgarian Power Industry", P. 358, (ENERGETIKA,
Vol. 4, No. 8, Aug. 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12,
Dec. 1954, Uncl.

FOSTLER, L.

"Grounded protective device of bus bars."

ENEROETIKA. Praha, Czechoslovakia, Vol. 9, May 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, September 1959
Unclassified

POSTLER, M.

POSTLER, M. Cryostat with high frequency heating. p. 320
Vol. 50 no. 2 Feb. 1956 CHEMICK LISTY, PRAHA, CZECH.

SOURCE: East European Accessions List (EEAL) Vol. 6, N^o. 4, April 1957

Postler, M.

Cryostat with high-frequency heating. J. Julian, J.
Hodek, and M. Postler (Vysoká škola chem.-technol.,
Prague). Chem. Listy 50, 320-2 (1956). An exptl. set-up
is described which maintains the temp. in the range from
-81 to -103° with a precision $\pm 1.0 \times 10^{-3}$. E.E.

(2)

MALICH, F.A.; LOSHAK, M.Z.; POSTERNYAK, Ye.F., inzh., red.; SHILLING, V.A.,
red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Hydraulic headstock for circular grinding machine] Gidravlicheskaya
peredniaia babka dlia krugloshlifoval'nogo stanka. Leningrad, 1961.
7 p. (Leningradskii Dom nauchno-tekhnicheskoi propagandy. Obmen pere-
dovym opytom. Seriya: Modernizatsiya i remont oborudovaniia, no.3)
(MIRA 14:7)

(Grinding machines)

BELYAYEV, Mikhail Fedorovich; POSTERNYAK, Ye.F., inzh., red.; SHILLING, V.A.,
red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Portable machine for machining guides of large machine tools with
cutters equipped with powder-metal tips] Perenosnyi stanok dlia ob-
rabotki napravliaiushchikh krupnykh metallorezhushchikh stankov fre-
zami s mineralokeramicheskimi plastinkami. Leningrad, 1961. 16 p.
(Leningradskii Dom nauchno-tehnicheskoi propagandy. Ohmen peredovym
opytom. Seriia: Mekhanicheskaya obrabotka metallov, no.5)

(MIRA 14:7)

(Milling machines)

IVANOV, Valeriy Vasil'yevich; POSTERNYAK, Ye.F., inzh., red.; SHILLING,
V.A., red. izd-va; GVIRTS, V.L., tekhn. red.

[Dynamic balancing of rotors of high-speed machines] Tekhnologiya
dinamicheskogo uravnoveshivaniia rotorov bystrokhodnykh mashin.
Leningrad, 1961. 21 p. (Leningradskii Dom nauchno-tekhnicheskoi pro-
pagandy. Ohmen peredovym opyтом. Seriia: Mekhanicheskaya obrabotka me-
tallov, no.14) (MIRA 14:7)

(Balancing of machinery)

TAZ'BA, Shabsay L'vovich; USHAKOV, Anatoliy Ivanovich; POSTERNYAK, Ye.F.,
inzh., red.; SHILLING, V.A., red. izd-va; GVIERTS, V.L., tekhn.
red.

[Using program control in the automation of a turret lathe] Avto-
matizatsiya revol'vernogo stanka s primeneniem programmного up-
ravleniya. Leningrad, 1961. 24 p. (Leningradskii Dom nauchno-
tekhnicheskoi propagandy. Obmen peredovym opyтом. Seriya: Moder-
nizatsiya, avtomatizatsiya i remont oborudovaniia, no.2)
(MIRA 14:7)

(Lathes—Numerical control)

FEL'DMAN, Daniil Il'ich; POSTERNYAK, Ye. F., red.; KOMICHEV, A.G., red. iad-
va; BELOGUROVA, I.A., tekhn. red."

[Using capron in industry; practice of the zaporozh'ye "Kommunar"
Automobile Plant] Primenenie kaprona v promyshlennosti; opyt Zapo-
rozhskogo avtomobil'nogo zavoda "Kommunar"; stenogramma lektsii.
(MIRA 14:7)
Leningrad, 1961. 43 p.
(Zaproshye—Motor vehicle industry) (Nylon)

DUBNOV, L.V.; POSTNICHENKO, E.V.

Study of the dependence of the critical diameter and the minimum initiating impulse on the density of some coal mining explosives.
Vzryv. delo no.52/9:187-188 '63. (MIRA 17:12)

1. Mezhdudomstvennaya komissiya po vzryvnому delu.

POSENIKOV, A.

Rational use of wood in applying the technique of gluing. p. 11.

NARODNI SUMAR. (Društvo sumarskih inženjera i tehnicara Bosne i Hercegovine)
Sarajevo, Yugoslavia. Vol. 12, no. 1/3, Jan./Mar. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 1, no. 6, Aug. 1959.

Uncl.

POSTNIKOV, A.; POTKONJAK, M.; PASALIC, J.

Some current problems in processing beechwood. p. 411.

NARODNI SUMAR. (Drustvo sumarskih inzenjera i tehnicara Bosne i Hercegovine)
Sarajevo, Yugoslavia. Vol. 13, no. 7/8, July/Aug. 1959.

Monthly List of East European Accessions (EEAI) LC Vol. 9, no. 2, Feb. 19~~60~~.

Uncl.

POSTNIKOV, A.; POLEVOY, S.; MAZOK, N.

Work and live as communists should. Mashinostroitel' no.9:34-35
S '59. (MIRA 13:2)
(Minsk--Automobile industry)

POSTNIKOV, A.A.

V.K.Miraviev's taps for trapezoidal threads. Mashinostroitel'
(MIRA 16:5)
no.6:21 Je '62
(Taps and dies)

ZHEZAKIN, D.; KLANIN, I.; POSTNIKOV, A.

Methods for establishing increased norms in welding and founding work. Sots. trud no. 3:58-92 Ag '57. (MIRA 10:9)
(Welding--Production standards) (Founding--Production standards)

137-58-6-12654

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 211 (USSR)

AUTHORS: Zhmakin, D., Klanin, I., Postnikov, A.

TITLE: A Method of Establishing Firm Time Standards for Welding and Casting Operations (Metodika sozdaniya ukreplennykh normativov na svarochnyye i liteynyye raboty)

PERIODICAL: Sots. trud, 1957, Nr 8, pp 88-92

ABSTRACT: Methodological instructions prepared by the heavy-machinery VPTI for establishment of time standards based on motion study for welding and casting operations are presented. Consolidated time standards (TS) for welding jobs are developed on the basis of specific quotas for the component operations. Depending upon the degree of consolidation, the standards may fall into three categories: 1. TS for the complex of operations and change-overs performed by the welder. An example is given of the compilation of a TS for the complex of operations involving non-operative time in setting up an automatic welder at the start of a seam and shutting it off after the weld is made. 2. TS for actual working time only in welding one running meter of weld. All the elements of the unit-of-production time quota

Card 1/2

137-58-6-12654

A Method of Establishing Firm Time Standards for Welding (cont.)

are classified into two groups in accordance with the length of the weld and in accordance with the product and the operation of the equipment. 3. Standard quotas for "per-piece" time, developed on the basis of the standard production processes and time standards for component operations. Time quotas for casting operations are set on the basis of analysis and systematization of the results of stop-watch studies of the individual elements in the production process.

N.G.

1. Welding--Standards
2. Foundries--Standards
3. Labor--Performance
4. Industrial production--Standards

Card 2/2

Postnikov, A.

Postnikov, A. On some trigonometric inequalities. Doklady Akad. Nauk SSSR (N.S.) 81, 501-504 (1951).
(Russian)

Let $S = \sum_{x=1}^N e^{ix f(x)}$, where $f(x)$ is real. It is well known that, if $\Delta f(x) = f(x+1) - f(x)$ is monotonic and

$$0 < \theta < \Delta f(x) < 1 - \theta,$$

then $|S| \leq 1/\theta$. This paper develops a number of extensions with the monotonic condition relaxed. Thus (Theorem 3), if $\Delta f(1), \dots, \Delta f(N-1)$ contains a monotonic subsequence of length l , and $\epsilon = \max |\Delta f(x) - \Delta f(y)|$, then

$$|S| \leq \{1 + \pi\epsilon(N-l-1)\}/\theta;$$

and (Theorem 4), if $\varphi(x)$ is monotonic, $0 < \varphi(x) < 1 - \theta$, and $|\Delta f(x) - \varphi(x)| < \epsilon$, then $|S| \leq \{1 + \pi\epsilon(N-1)\}/\theta$. The proofs are by an adaptation of the analytical counterpart of Kuz'min's geometrical proof of the original inequality. There are numerous misprints.

A. E. Ingham.

Source: Mathematical Reviews,

Vol. 13 No. 5

POSTNIKOV, A.

Certain peculiarities of line shipping [with English summary in
supplement]. Vnesh. torg. 29 no.4:20-22 '59. (MIRA 12:6)
(Steamboat lines) (Shipping)

POSTNIKOV, A.A.

V.K. Murav'yev taps for trapezoid threading. Ratsionalizatsiya
no.12:22 '62.

POSTNIKOV, A.A.

Problems in the economics of production and utilization of wall
materials in Murmansk Province. Izv.Kar.i Kol.fil.AN SSSR
no.5:113-121 '58. (MIRA 12:9)

1. Laboratoriya stroitel'nykh materialov Kol'skogo filiala AN SSSR.
(Murmansk Province--Building materials)

KHALTURIN, K.D., arkhitektor; CHAYKO, I.M., arkhitektor; GOLUBEV, S.L., inzhener; DOBROKHOTOV, I.G., inzhener; KRUPITSY, K.K., inzhener; POGORZHEL'SKIY, L.A., inzhener; POSTNIKOV, A.A., inzhener; SHARYY, Yu.V., kandidat tekhnicheskikh nauk; OL', A.A., professor, doktor arkhitektury; URAV'YEV, B.V., kandidat arkhitektury; VASILL'YEV, B.D., doktor tekhnicheskikh nauk professor, redaktor; SHUR, N.Ya., redaktor izdatel'stva; ROZOV, L.K., tekhnicheskiy redaktor

[Large-block construction in Leningrad] Krupnoblochnoe stroitel'stvo v Leningrade. Leningrad, Gos.izd-vo lit-ry po stroit. i arkhit., 1957. 93 p.

(MLRA 10:7)

1. Akademiya stroitel'stva i arkhitektury SSSR. Leningradskiy filial:

(Leningrad--Precast concrete construction)
(Leningrad--Apartment houses)

PLYUSNIN, M.I.; POSTEL'NIKOV, A.F.

Logging exploratory wells in complex ore deposits of southern Kazakhstan. Izv. vys. uchev. zav.; geol. i razv. no.3:94-110 Mr '58. (MIRA 11:10)

1. Moskovskiy geologorazvedochnyy institut im. S. Ordzhonikidze. (Kazakhstan--Ore deposits) (Logging (Geology))

POSTLER, L.

The self-synchronizing of synchronous machines. p. 16.

(Energetika. Vol. 7, no. 1, Jan. 1957. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Incl.

POSTLER, L.

800-kv. direct-current transmission. p. 157.

(Energetika. Vol. 7, no. 3, Mar. 1957. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

POSTLER, L.

Short-circuit experiments on 220 kv. lines. (To be contd.) p. 221. (Energetika, Vol. 7, No. 4, Apr 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

POSTLER, L.

Single-phase reclosing and its testing by short-circuit experiments. p. 310.

(Elektrotechnicky Obzor. Vol. 46, no. 6, June, 1957. Praha, Czechoslovakia)

S0: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

USSR/Human and Animal Physiology. Neuromuscular Physiology

T-11

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65595

Author : Postan N.

Inst : AS GSSR

Title : Is Proper Tonus an Expression of the Morphoplastic Character
of Muscle?

Orig Pub : V. sb.: Probl. sovrem. fiziol. nervn. i myshechn. sistem.
Tbilisi, AN Gruz. SSR, 1956, 445-454

Abstract : The author distinguishes two processes of significance in the mechanical effect of a muscle. The process associated with considerable expenditure of energy causes rapid contraction and relaxation of the individual elements; in this connection tetanus is considered as the coordination of the effects of the separate contractile elements. Distinct from the first process, the "morphoplastic" process (under the influence of temperature, pressure and ATP) is expressed in comparatively slow changes in the structure of the contractile elements. This process is associated with a

Card : 1/2

POSTNIKOV, A.G., insh.

Test data on the strength of silicate blocks. Sbor. trud.
IUZHNII no.3:236-254 '59. (MIRA 13:7)
(Building blocks--Testing)

POSTNIKOV, A. G.

"Concerning the Differential Independence of Dirichlet Series." Thesis for degree of Cand. Physicomathematical Sci. Sub 14 Dec 49, Sci Res Inst of Mathematics, Moscow Order of Lenin State U imeni M. V. Lomonosov.

Summary 82, 18 Dec 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1949. From Vechernaya Moskva, Jan-Dec 1949.

Postnikov, A. G.

Postnikov, A. G. On the differential independence of
Dirichlet series. Doklady Akad. Nauk SSSR (N.S.) 66,
561-564 (1959). (Russian)

Let m be a positive integer and χ any character modulo m . It is shown that the $\epsilon(m)$ Dirichlet series $L(s; \chi)$ are differentially independent. By this is meant that no nonzero polynomial in s , the series and their derivatives of arbitrary orders, with constant coefficients, vanishes for every s . The author proves first that if several Dirichlet series of the type $\sum a_n n^{-s}$ are differentially dependent, then the series obtained from them by suppressing all terms except those for which n is prime, and sufficiently large, satisfy together a linear differential equation.

J. P. RH.

15-1. Reviews,

Vol. 15, no. 10

LPH

GRW

Fos'ni Kov, A. G.

A Postnikov, A. G. The remainder term in the Tauberian theorem of Hardy and Littlewood. Doklady Akad. Nauk SSSR (N.S.) 77, 193-196 (1951). (Russian)

It is proved that, if $\sum n_a e^{-\lambda a} \sim \sigma^{-1} + O(1)$ as $a \rightarrow +0$, and if $a_n \geq 0$, then $\sum_{n \leq P} n_a = P + O[P/\sqrt{(\log P)}]$ as $P \rightarrow \infty$. The idea is to consider $\sum a_n e^{-\lambda a} f(e^{-\lambda a})$ with a suitable $f(x)$ and to approximate to $f(x)$ in $[0, 1]$ by a polynomial $P_N(x) = \sum_0^N b_i x^i$ as in Karamata's method. But $P_N(x)$ is now chosen in a special way, namely as the best approximation to $f(x)$ in the sense of minimizing $E_N = \max_{0 \leq x \leq 1} |f(x) - P_N(x)|$ (for a given continuous $f(x)$ and given N). With this choice, the terms of $\sum |b_i|$ (and so the sum itself) do not exceed the corresponding expressions for the polynomial $2M \cos(N \arccos(2x-1))$, where $M = \max_{0 \leq x \leq 1} |f(x)|$; while $E_N < 12\omega(1/2N)$, where $\omega(\delta)$ is the modulus of continuity of $f(x)$. This leads to

$$\sigma \sum_1^\infty a_n e^{-\lambda a} f(e^{-\lambda a}) = \int_0^1 f(x) dx + O(M6^N\sigma) + O(\omega(1/2N)).$$

The stated result is obtained by taking $f(x)$ to be 0 in $[0, e^{-\alpha}]$, $1/x$ in $[e^{-\alpha}, 1]$, linear in $[e^{-\alpha}, e^{-\beta}]$, and choosing $\sigma = 1/P$, $N = [c \log P]$ ($0 < c < 1/\log 6$), $\alpha - \beta = 1/\sqrt{(\log P)}$, β or $\alpha = 1$ (to obtain alternative inequalities for $\sum_{n \leq P} n a_n$).

A. E. Ingham (Cambridge, England).

Source: Mathematical Reviews,

Vol. 22 No. 10

LEONOV, Viktor Petrovich; POSTNIKOV, A.G., doktor fiz.-mat.
nauk, otv. red.; SHIRYAYEV, A.N., kand. fiz.-matem.
nauk, otv. red.

[Some applications of higher semi-invariants to the theory
of stationary random processes] Nekotorye primeneniia star-
shikh semiinvariantov k teorii statsionarnykh sluchainykh
protsessov. Moskva, Izd-vo "Nauka," 1964. 65 p.

(MIRA 17:6)

POSTNIKOV, A. G.

USSR/Mathematics - Trigonometric Inequalities

1 Dec 71

"Certain Trigonometric Inequalities," A. Postnikov

"Dok Ak Nauk SSSR" Vol LXXXI, No 4, pp 501-504

Develops Kuz'min's method thus permitting one to obtain a number of evaluations of trigonometric sums. R. O. Kuz'min gave an elementary proof of a certain inequality whose contrary sequences possess great value in problems of the distribution of continued fractions of functions and in certain other problems of number theory and math analysis. (Cf. "Zhur

202168

USSR/Mathematics - Trigonometric Inequalities (Contd)

1 Dec 51

Leningrad Fiz-Matemat. Obshch" 1, 2, 233, 1927). Submitted by Acad I. M. Vinogradov
6 Oct 51.

202168

POSTNIKOV, A. G.

231T68

USSR/Mathematics - Theory of Numbers, Probability 11 May 52

"Certain Generalizations Concerning Uniform Distributions of Fractions," N. M. Korobov, A. G. Postnikov

"Dok Ak Nauk SSSR" Vol 84, No 2, pp 217-220

Demonstrates that the uniformity of distribution of certain of its subsequences follow, under familiar conditions, from the uniformity of distribution of the fractions of the sequence. Demonstrates the theorem: if for any integer h

231T68

the difference function $\Delta F(x) = F(kx+h) - F(x)$ is uniformly distributed, then for each pair of integers I and M the function $F(lx+M)$ is also uniformly distributed. Submitted by Acad I. M. Vinogradov 11 Mar 52.

231T68

POSTNIKOV, A. A.

Functions, Exponential

Problem of the distribution of fractional parts of an exponential function. Dokl. AN SSSR 86 No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

Postnikov, A. G.

USSR/Mathematics - Number Theory 21 Sep 53
 "The Tauber Theorem for Dirichlet Series, A.G.
 Postnikov, Math Inst, Acad Sci USSR

DAN SSSR, Vol 92, No 3, pp 487-490

Finds the order of magnitude 0 of the coeffs a_n
 and b_n and of certain Dirichlet series $f(s)$, where
 $f(s) = \sum_{n=0}^{\infty} a_n z^n$, $f(s) = \sum_{n=0}^{\infty} b_n / n^s$ ($s = \sigma + it$). For
 example, $\sum_{n=1}^{\infty} 1/n(k - \ln n)^2 = O(1)$ for $k > 4$;
 $\sum_{n=1}^{\infty} 1/n(k - \ln n)^2 = O(1)$ for $k < 4$;
 $\sum_{n=1}^{\infty} 1/n(s-n) = O(1)$ for $s=1$ to $s=0$. Cites A.Ye. Ingram,
 Raspredeleniye Prostiykh Chisel /Distribution of
 Primes/ 268r82

Prime Numbers, 1936. Presented by Acad M.V.
 Keldysh 23 Jul 53.

268r82

POSTNIKOV, A. G.

USSR/Mathematics

Card : 1/1

Authors : Postnikov, A. G.

Title : General theorem for a power series of the Abelian type

Periodical : Dokl. AN SSSR, 96, Ed. 5, 913 - 916, June 1954

Abstract : A generalization of the Abelian theorem on conversion of a power series. The proof is accomplished by the application of the Riemann integral. One reference.

Institution : Acad. of Sc. USSR, The V. A. Steklov Mathematics Institute.

Presented by: Academician, I. M. Vinogradov, April 2, 1954

SUBJECT USSR/MATHEMATICS/Theory of probability CARD 1/2 PG - 22
 AUTHOR POSTNIKOV A.G.
 TITLE On an application of the central boundary value theorem of the
 calculus of probability.
 PERIODICAL Uspechi Mat. Nauk 10, 1, 147-149 (1955)
 reviewed 5/1956

With probability-theoretical methods a Schneider's lemma is proved (T.Schneider, Journ. reine u. angew. Math. 175, No.3, lemma 1). If r_1, r_2, \dots, r_k are natural numbers ($r_i \geq 2$) and if $J_k(t)$ is the number of solutions of the inequation $\sum_{l=1}^k \frac{x_l}{r_l} \leq t$ in integers $|x_l| \leq \frac{r_l}{2}$ ($l=1, \dots, k$), then for every x

and $k \geq 2$ holds

$$\left| \frac{J_k \left(x \sqrt{\frac{1}{3} \sum_{l=1}^k \frac{[\frac{r_l}{2}]}{r_l^2} \left([\frac{1}{2}] + 1 \right)} \right)}{\prod_{l=1}^k (2 [\frac{r_l}{2}] + 1)} - \frac{1}{\sqrt{2\pi}} \int_{-\infty}^x e^{-\frac{u^2}{2}} du \right| \leq C \frac{\log k}{\sqrt{k}}$$

For the proof a random variable ξ_l with the distribution function $F_l(x)$ with

$r_l = c$, the theorem is proved.

Postnikov, A.G.

Postnikov, A. G.; and Romanov, N. P. A simplification of A. Selberg's elementary proof of the asymptotic law of distribution of prime numbers. Uspehi Mat. Nauk (N.S.) 10 (1955), no. 4(66), 75-87. (Russian)

The underlying idea of this paper is to give an elementary proof of the prime-number theorem in the form

$$(1) \quad M(x) = \sum_{n \leq x} \mu(n) = o(x).$$

This deduction is made from the elementary identity

$$(2) \quad M(x) \log x + \sum_{p \leq x} M\left(\frac{x}{p}\right) \log p = O(x).$$

This is an old identity which appeared in Landau's thesis, and a direct simple path from (2) to (1) would be rather interesting. However, in addition to (2), the authors use the Selberg identity

$$(3) \quad \theta(x) \log x + \sum_{p \leq x} \theta\left(\frac{x}{p}\right) \log p = 2x \log x + O(x).$$

This is applied to eliminate the explicit appearance of the primes in (2), converting it into the inequality

$$(4) \quad |M(x)| \leq \frac{1}{\log x} \sum_{n \leq x} \left| M\left(\frac{x}{n}\right) \right| + O\left(\frac{x \log \log x}{\log x}\right).$$

Then applying an iteration scheme analogous to that used by Selberg, (1) is deduced from (4). The only "advantage" gained by dealing with $M(x)$ rather than $\theta(x)$ stems from the fact that $M(x)$ has limited jumps at the integers (since $|\mu(n)| \leq 1$). *H. N. Shapiro.*

1 - F/W

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Postnikov, A. G.

1 - F/W

"Postnikov, A. G. On the sum of characters with respect
to a modulus equal to a power of a prime number.

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Izv. Akad. Nauk SSSR. Ser. Mat. 19, 11-16 (1955).

(Russian)

The author proves the following lemma: Let p be a prime greater than 2 and n a positive integer not of the form $ap^f - r$ for any $f > 0$, $0 \leq r < f$, $(a, p) = 1$. Then there exists a polynomial $f(u) = u + a_1u^2 + \dots + a_{n-1}u^{n-1}$ with integral coefficients such that

$$\frac{\text{ind}_g(1+pu)}{p-1} \equiv \Lambda f(u) \pmod{p^{n-1}},$$

for all integers u , where g is any given primitive root modulo p^n . Here $(\Lambda, p) = 1$ and Λ is defined by

$$\frac{\text{ind}_g(1+p)}{p-1} \equiv \Lambda f(1) \pmod{p^{n-1}}.$$

The coefficients a_k are defined as follows: Let $k = p^r k'$ where $(k', p) = 1$; then

$$a_k = (-1)^{k+r} p^{k-r-1} \chi_{k'}$$

(over)

POSTNIKOV, A.G.

where κ_p is a root of the congruence

$$k'\kappa_p \equiv 1 \pmod{p^{n-1+\tau}}.$$

In proving this result the fact that $1+p$ generates the subgroup of residues modulo p^n of the form $1+pu$ is used.

Since a character $\chi(k)$ modulo p^n and of degree not less than p^{n-1} can be expressed as

$$\chi(k) = \exp\{2\pi i m p^{1-n} \text{ind}_q k/(p-1)\},$$

where $(m, p)=1$, the lemma can be used to replace character sums by exponential sums involving the polynomial $f(u)$ in their exponents. By using estimates, of Vinogradov for such sums with polynomial exponents, the author proves that if

n is not of the form $ap^l - v$, as in the lemma, then

$$\left| \sum_{k=1}^1 \chi(k) \right| \leq \{8(n-2)\}^{(n-2)\lambda/2} p^\mu l^{1-\mu},$$

where $\lambda = \log \{12(n-2)(n-1)/\tau\}$, $\mu^{-1}\tau = 3(n-1)^2\lambda$, and $\tau = 1$ if $p^{1+1/(n-2)} \leq l \leq p^2$, $\tau = (l/p)^r$ if $p^2 \leq l$. A similar result can be proved for n of the form $ap^l - v$. These estimates are applied to show that the associated Dirichlet L -function

$L(s, \chi)$ is free of zeros in a certain region.

R. A. Rankin (Glasgow).

2/2

POSTNIKOV, A. G.

POSTNIKOV, A. G.: "The use of I. M. Vinogradov's Method of Trigonometric sums for Purposes of Investigation." Published by the Acad Sci USSR. Acad Sci USSR. Mathematics Inst imeni V. A. Steklov. Moscow, 1956. (DISSERTATION FOR THE DEGREE OF DOCTOR IN PHYSICOMATHEMATICAL SCIENCE)

So: Knizhnaya letopis' No 15, 1956, Moscow

ABRAMOV, A.A., redaktor; BOLTYANSKIY, V.G., redaktor; VASILL'YEV, A.M.,
redaktor; MEDVEDEV, B.V., redaktor; MYSHKIS, A.D., redaktor;
NIKOL'SKIY, S.M., otvetstvennyy redaktor; POSTNIKOV, A.G., redaktor;
PROKHOROV, Yu.V., redaktor; RYBNIKOV, K.A., redaktor; UL'YANOV, P.L..
redaktor; USPENSKIY, V.A., redaktor; CHETAYEV, N.G., redaktor;
SHILOV, G.Ye., redaktor; SHIRSHOV, A.I., redaktor; SIMKINA, Ye.N.,
tekhnicheskij redaktor

[Proceedings of the all-Union Mathematical Congress] Trudy tret'ego
vsesoyuznogo Matematicheskogo s"ezda; Moskva iiun'-iiul' 1956.
Moskva, Izd-vo Akademii nauk SSSR. Vol.2. [Brief summaries of
reports] Kratkoе soderzhanie obzornыkh i sektsionnykh dokladov.
1956. 166 p. (MLRA 9:9)

1. Vsesoyuznyy matematicheskiy s"ezd. 3, Moscow, 1956.
(Mathematics)

Postnikov, A. G.

Call Nr: AF 110825

Transactions of the Third All-union Mathematical Congress, (Cont.)^{*} Moscow,
Jun-Jul '56, Trudy '56, v. 1, Sect. Rpts, Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
Lomadze, G. A. (Tbilisi). On Representation of Numbers With
the Sums of Generalized Polygonal Numbers. 7

Malyshëv, A. V. (Leningrad). Asymptotic Distribution of
Integral Points on Some Ellipsoids. 7-8

There are 3 references, all USSR.

Popov, A. I. (Leningrad). Regarding the Theory of Ultra-exponential Function of G. F. Voronoy. There is 1 USSR reference. 8

Postnikov, A. G. (Moscow). Additive Problems with Increasing Number of Summands. 8-9

Postnikov, A. G. (Moscow). Exponential Trigonometric Sum 9-10

Postnikov, A. G. (Moscow). Recurrent Relations Between Diophantine Inequalities in the Field of Power Series. 10-11

Card 4/80

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V. V. Krasovskiy, N. G.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress^k (Cont.) Moscow,
Jun-Jul '56, Trudy '56 v. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
Postnikov, A. G. (Moscow). On L-series for Modulus, Which Equals
the Exponent of the Prime. 11

Rodoskiy, K. A. (Saratov). On Distribution of Primes in
Short Arithmetical Progressions. 11-12

There is 1 USSR reference. 11-12

Romanov, N. P. (Tashkent). Asymptoticity of Power Series
on Boundaries of Convergence Circle and Limit Theorems in
the Theory of Numbers. 12-13

There are 3 references, 2 of which are USSR, and 1 English.

Romanov, N. P. (Tashkent). Operator Methods in the Theory
of Numbers. 13

Mention is made of Chebyshev, P. L., Shnirel'man, L. G., and
Postnikov, A. G.

Card 5/80

*

Name: POSTNIKOV, Al'eksandr Georgiyevich

Dissertation: Studies according to I. M. Vinogradov's Methods
of Trigonometrical Sums

Degree: Doc Phys-Math

Affiliation: [not indicated]

Defense Date, Place: 26 Apr 56, Council of Math Inst imeni Steklov,
Acad Sci USSR

Certification Date: 15 Sep 56

Source: BMVO 6/57

Postnikov, M.G.

Postnikov, A. G., Estimation of an exponential trigono-
metric sum. Izv. Akad. Nauk SSSR, Ser. Mat. 20 1-FW
 (1956), 661-666. (Russian)

Let g be an integer greater than unity and let

$$S = \sum_{z=0}^{P-1} e^{2\pi i z g^z}$$

where $0 \leq \epsilon < 1$. It is shown that this interval can be divided into two subsets \mathfrak{M}_1 and \mathfrak{M}_2 such that, for large P ,

$$|S| \leq K(\epsilon) \frac{P}{\log^{1-\epsilon} P}$$

when $\epsilon \in \mathfrak{M}_2$, and

$$\text{meas } \mathfrak{M}_1 = O\{\exp(-K \log^3 P + O(\log P))\}.$$

Here K is a positive constant and $K(\epsilon)$ depends only on ϵ , which is positive.

The proof uses an upper bound for $|S|^2$ obtained by the author in a previous paper [Dokl. Akad. Nauk SSSR (N.S.) 86 (1952), 473-476, MR 14, 359] together with a lemma which states that the number of numbers of l digits in the scale of r in which a given digit b occurs more than η/r times, where $r > \eta > 2$, is $O(l^4 r^l \exp(-4/\eta^2/r^2))$.

R. A. Rankin (Glasgow)

2

11/1
SMW

SUBJECT USSR/MATHEMATICS/Number theory CARD 1/2 PG - 586
 AUTHOR POSTNIKOV A.G.
 TITLE Additive problems with an increasing number of summands.
 PERIODICAL Izvestija Akad.Nauk 20, 751-764 (1956)
 reviewed 2/1957

Let for an integer x also $f(x)$ be an integer. The author seeks the number of representations of an integer N in the form

$$N = f(x_1) + f(x_2) + \dots + f(x_n)$$

if $0 \leq x_i \leq P$, $i=1,2,\dots,n$ and $n \rightarrow \infty$. If P is fixed, then this problem reduces to probability theoretical theorems on sums of independent random variables. The author shows that for an increasing P (simultaneously with n) the problem also can be solved if estimations of the trigonometric sums $\sum_{x=0}^P e^{2\pi i f(x)}$

are known. The solution is given according to the scheme of proof of the local limit value theorem of the theory of probability. As examples the author considers the cases $f(x) = x$ and $f(x) = x^2$. The following theorems are proved:
 1. There exists a constant k_1 such that uniformly with respect to integers N there holds the asymptotic formula:

Izvestija Akad.Nauk 20, 751-764 (1956)

CARD 2/2

PG - 586

$$r_{n,p}(N) = \frac{(P+1)^n}{\sqrt{\pi n \frac{P^2+2P}{6}}} 1 - \frac{(N-n \frac{P}{2})^2}{\frac{n \cdot P^2+2P}{6}} + O\left(\frac{(P+1)^{n-1}}{n}\right),$$

where $r_{n,p}(N)$ is the number of solutions of $x_1+x_2+\dots+x_n = N$ in the numbers $0 \leq x_i \leq p \leq \frac{k^n}{n}$, $i=1,2,\dots,n$.

2. If $r_{n,p}(N)$ denotes the number of solutions x_i ($0 \leq x_i \leq P$, $i=1,2,\dots,n$) of $x_1^2+x_2^2+\dots+x_n^2 = N$ and if $P \leq K^n$ ($K = \text{const} > 1$), then:

$$r_{n,p}(N) = \frac{(P+1)^n}{\sqrt{\pi n \frac{P(P+2)(2P+1)(8P-3)}{90}}} 1 - \frac{(N-n \frac{P(2P+1)}{6})^2}{\frac{n P(P+2)(2P+1)(8P-3)}{90}} + O\left(\frac{(P+1)^{n-2}}{n}\right).$$

POSTNIKOV, A.G.

SUBJECT USSR/MATHEMATICS/Algebra CARD 1/1 PG - 619
AUTHOR POSTNIKOV A.G.
TITLE The properties of the solutions of diophantic inequations in
the field of formal power series.
PERIODICAL Mat.Sbornik, n. Ser. 40, 295-302 (1956)
reviewed 2/1957

The present paper contains an elaboration of the results announced in an
earlier paper of the author (Doklady Akad.Nauk 106, 21-22 (1956)).

INSTITUTION: Moscow.

POSTNIKOV, A.G.

USSR/Mathematics

Card 1/1 Pub. 22 - 5/43

Authors : Postnikov, A. G.

Title : Properties of solutions of Diophantine inequalities in the field of formal power series

Periodical : Dok. AN SSSR 106/1, 21-22, Jan 1, 1956

Abstract : Exponential series of the type $\omega(x) = \sum_{n=-\ell}^{\infty} a_n x^n$

are considered in view of Diophantine's inequalities. One USA reference (1941).

Institution : Acad. of Sc., USSR, Mathematical Institute imeni A. A. Steklov

Presented by: Academician I. M. Vinogradov, September 28, 1955

SUBJECT USSR/MATHEMATICS/Theory of functions CARD 1/1 PG - 309
 AUTHOR POSTNIKOV A.G.
 TITLE "Generalization of a problem of Hilbert.
 PERIODICAL Doklady Akad. Nauk 107, 512-515 (1956)
 reviewed 10/1956

Hilbert's conjecture (proved by Ostrowski, Math. Zeitschr. 8 (1920)) that the function

$$\zeta(x, s) = \sum_{n=1}^{\infty} \frac{x^n}{n^s}, \quad |x| \leq 1 \quad \text{Re } s > 1$$

satisfies no partial algebraic differential equation is generalized to the functions

$$\mathcal{L}(x, s, \chi) = \sum_n \frac{\chi(n)}{n^s} x^n,$$

where χ is a character mod m. By aid of Ostrowski's scheme and some own results (Doklady Akad. Nauk 66, 561 (1949)) the author proves that (different) functions $\mathcal{L}(x, s, \chi)$ for fixed m cannot satisfy a relation of the form

$$\phi(x, s, \frac{\partial^{p+q} \mathcal{L}(x, s, \chi)}{\partial x^p \partial s^q}) = 0,$$

ϕ - polynomial.

INSTITUTION: Math. Inst. Acad. Sci. USSR.

SUBJECT USSR/MATHEMATICS/Theory of numbers CARD 1/2 PG - 345
 AUTHOR POSTNIKOV A.G.
 TITLE Additive problems with an increasing number of summands.
 PERIODICAL Doklady Akad. Nauk 108, 392 (1956).
 reviewed 10/1956

The author formulates two theorems without proof:
1. Let $r_{n,p}(N)$ be the number of solutions of the diophantic equation

$$(1) \quad x_1 + x_2 + \dots + x_n = N$$

in the numbers $0 \leq x_i \leq p$, $i=1,2,\dots,n$. There exists a constant k such that for
 the number of the solutions of (1) in the numbers $0 \leq x_i \leq \frac{K}{n}$ holds:

$$r_{n,p}(N) = \frac{(p+1)^n}{\sqrt{\pi n} \frac{p^2 + 2p}{6}} \exp \left[-\frac{(N - n \frac{p}{2})^2}{n \frac{p^2 + 2p}{6}} \right] + o \left(\frac{(p+1)^{n-1}}{n} \right).$$

This formula holds uniformly with respect to integers N .

2. Let $r_{n,p}(N)$ be the number of the solutions of the diophantic equation

Doklady Akad. Nauk 108, 392 (1956)

CARD 2/2

PG - 345

$$x_1^2 + x_2^2 + \dots + x_n^2 = N$$

in the numbers $0 \leq x_i \leq p \leq K^n$, $i=1,2,\dots,n$, $K > 1$ constant. Then, uniformly with respect to integers N there holds the asymptotic formula

$$r_{n,p}(N) = \frac{(p+1)^n}{\sqrt{\pi n \frac{p(p+1)(2p+1)(8p-3)}{90}}} \exp \left[-\frac{(N-n \frac{p(2p+1)}{6})^2}{n \frac{p(p+2)(2p+1)(8p-3)}{90}} \right] + O\left(\frac{(p+1)^{n-2}}{n}\right).$$

INSTITUTION: Mathematical Institute, Acad.Sci. USSR.

POSTNIKOV, A. G.

"Analogon des Tarryschen Problems fuer die Exponentialfunktion,"

paper presented at Celebration in honor of Leonhard Euler, Berlin, 21 Mar 57.

SO: Wissenschaften Annalen, No. 7, 1957.

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342620010-2

POSTNIKOV, A. G.

VITSADZE, A.V., POSTNIKOV, A.G.

Session of Bulgarian mathematicians. Usp.mat.nauk 12 no.2(74):246
Mr-Ap '57. (MIRA 10:7)

(Sofia--Mathematics)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342620010-2"

POSTNIKOV, A.G.

Criterion for testing the uniform distribution of a function in a
complex domain [with summary in English]. Vest. IZU 12 no.13:81-88
'57. (MIRA 10:11)

(Functions, Exponential)

POSTNIKOV, A.G.

38-4-3/10

AUTHOR:

POSTNIKOV, A.G., PYATETSKIY, I.I.

TITLE:

Normal Sequences of Signs According to Bernoulli (Normal'nyye po Bernulli posledovatel'nosti znakov).

PERIODICAL:

Izvestiya Akad.Nauk, Ser.Mat., 1957, Vol.21, Nr 4, pp.501-514(USSR)

ABSTRACT:

An unlimited sequence of independent experiments is assumed to take place in which an event with the probability p (q) can occur (be absent), $p+q = 1$. Let the occurrence be denoted by 1, the absence by 0. Let the arising sequence be denoted as result sequence. To each sequence $\alpha = (\alpha_1, \alpha_2, \alpha_3, \dots)$ of 0 and 1 there corresponds the real number of the interval $[0,1]$

$$(1) \quad \alpha = \frac{\alpha_1}{2} + \frac{\alpha_2}{2^2} + \dots + \frac{\alpha_n}{2^n} + \dots$$

On $[0,1]$ the following measure μ is introduced: $\mu([0, \frac{1}{2}]) = q$,

$$\mu([\frac{1}{2}, 1]) = p, \quad \mu([0, \frac{1}{4}]) = q^2, \quad \mu([\frac{1}{4}, \frac{1}{2}]) = qp,$$

$$\mu([\frac{1}{2}, \frac{3}{4}]) = pq, \quad \mu([\frac{3}{4}, 1]) = p^2 \quad \text{etc.}$$

The line

CARD 1/3

independent of s and Δ . Then α is

Normal Sequences of Signs According to Bernulli

38-4-3/10

a normal sign sequence according to Bernulli. The author proves the first theorem with the aid of the ergodic theorem of Birkhoff - Khinchin. On the other hand, however, the theorem is a consequence of the strong law of large numbers for Markov chains. The second theorem is a generalization of the criterion of Shapiro - Pyatetskiy (Izvestiya Akad. Nauk 15, 47-52, 1951).

PRESENTED: By I.M. Vinogradov, Academician

SUBMITTED: October 4, 1956

AVAILABLE: Library of Congress

CARD 3/3

POSTNIKOV, A.G.

AUTHOR: POSTNIKOV, A.G., PYATETSKIY, I.I.

38-6-1/5

TITLE: A Normal (According to Markov) Sequence of Signs and a Normal Continued Fraction.
(NORMAL'naya po Markovu posledovatel'-nost' z nakov i normal'naya tsepnaya drob')

PERIODICAL: Izvestiya Akademii Nauk, SSR, Seriya Matematicheskaya, 1957, Vol. 21, Nr. 6, pp. 729-746 (USSR)

ABSTRACT: The present paper is a continuation of the authors preceding publication [Ref. 1].

Theorem 1: In the space of a dynamic system let be given two invariant normed measures μ and $\bar{\mu}$. Let exist a constant $C > 0$ such that for every set \mathcal{M} measurable with respect to the measures μ and $\bar{\mu}$ there holds: $\bar{\mu}(\mathcal{M}) \leq C\mu(\mathcal{M})$. Let the system be undecomposable with respect to μ . Then for every open set there holds: $\bar{\mu}(\mathcal{M}) = \mu(\mathcal{M})$.
Let a system admit the states E_0 and E_1 . Let p_{ij} , $i=0,1$, $j=0,1$, be the probabilities of the transition from E_i into E_j . Let the initial probabilities be $p_0 = \frac{p_{10}}{p_{01}+p_{10}}$, $p_1 = \frac{p_{01}}{p_{01}+p_{10}}$. The result of such a scheme is given as a sequence of the signs 0 and 1, 0 for the occurrence of E_0 , 1 for E_1 . Let to the sequence

Card 1/4

A Normal (According to Markov) Sequence of Signs and a Normal
Continued Fraction.

38-6-1/5

$\alpha = (\alpha_1, \alpha_2, \dots)$ correspond the number $\alpha = \frac{\alpha_1}{2} + \frac{\alpha_2}{2^2} + \frac{\alpha_3}{2^3} + \dots$

On $[0, 1)$ let the measure μ be introduced as follows: Let the measure of $[\frac{A}{2^n}, \frac{A+1}{2^n})$, where $n \geq 0$ integral, $A \geq 0$ integral,

$A = 2^{n-1}\alpha_1 + 2^{n-2}\alpha_2 + \dots + \alpha_n$, be $p\alpha_1 p\alpha_2 \dots p\alpha_{n-1} \alpha_n$.

From the sequence (or number) $\alpha = \alpha_1, \alpha_2, \dots, \alpha_p, \dots$ the row

$$(\alpha_1 \alpha_2 \dots \alpha_s)(\alpha_2 \alpha_3 \dots \alpha_{s+1}) \dots (\alpha_p \alpha_{p+1} \dots \alpha_{p+s-1})$$

is formed. The row is called a ramp of length P and rank s of the number α . Let $N_p(\Delta)$, $\Delta = (\varepsilon_1, \varepsilon_2, \dots, \varepsilon_s)$, be the number

of combinations Δ in the ramp of length P and rank s . The sequence of signs α is called normal in the sense of Markov if for every $s \geq 1$ and every Δ there holds: there exists

$$\lim_{p \rightarrow \infty} \frac{N_p(\Delta)}{P}$$

and equals $\mu \Delta$.

Theorem 2: The measure μ of the set of numbers α being normal in the sense of Markov, equals 1.

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A Normal (According to Markov) Sequence of Signs and a Normal
Continued Fraction

38-6-1/5

Theorem 3: If for every $s \geq 1$ and every Δ there holds

$$\lim_{p \rightarrow \infty} \frac{N_p(\alpha, \Delta)}{p} < C \mu \Delta,$$

where $C = \text{const}$ does not depend on s and Δ , then α is a sequence of signs normal in the sense of Markov.
Two further theorems relate to the continued fractions

$$\alpha = \cfrac{1}{c_1 + \cfrac{1}{c_2 + \dots}},$$

also written in the form $\alpha = c_1 c_2 c_3 \dots$, whereafter for them the measure

$$M\Delta = \frac{1}{\log 2} \int_{\Delta} \frac{dx}{1+x}$$

is introduced. It is stated that all fractions α are normal with respect to the measure M (or with respect to the Lebesgue measure). The theorem 3 is transferred to fractions (theorem 4).
Two Soviet and 2 foreign references are quoted.

Card 3/4

A Normal (According to Markov) Sequence of Signs and a Normal
Continued Fraction

38-6-1/5

PRESENTED: By I.M. Vinogradov, Academician

SUBMITTED: November 17, 1956

AVAILABLE: Library of Congress

Card 4/4

NIKOL'SKIY, S.M., otv.red.; ABRAMOV, A.A., red.; BOLTYANSKIY, V.G., red.;
VASIL'YEV, A.M., red.; MEDVEDEV, B.V., red.; MYSHKIS, A.D., red.;
POSENKO, A.G., red.; PROKHOROV, Yu.V., red.; RYBNIKOV, K.A.,
red.; UL'YANOV, P.L., red.; USPENSKIY, V.A., red.; CHETAYEV, N.G.,
red.; SHILOV, G.Ye., red.; SHIRSHOV, A.I., red.; GUSEVA, I.N.,
tekhn.red.

[Proceedings of the Third All-Union Mathematical Congress] Trudy
tret'ego Vsesoiuznogo matematicheskogo s'ezda. Vol.3 [Synoptic
papers] Obzornye doklady. Moskva, Izd-vo Akad.nauk SSSR. 1958. 596 p.
(MIRA 12:2)
1. Vsesoyuznyy matematicheskiy s'ezd. 3d, Moscow, 1956.
(Mathematics--Congresses)

AUTHOR:

Postnikov, A.G.

SOV/38-22-3-8/9

TITLE:

The Strong Law of Large Numbers for the Selection From a Uniformly Distributed Random Variable (Usilennyj zakon bol'shikh chisel dlya vyborki iz ravnomerno raspredelennoy sluchaynoy velichiny)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya, 1958,
Vol 22, Nr 3, pp 433-438 (USSR)

ABSTRACT: Let

$$(1) \quad \alpha : \alpha_1, \alpha_2, \alpha_3, \dots$$

be a sequence of real numbers from the interval $[0, 1)$ and let $s \geq 1$ be an integer. Let furthermore

$$(2) \quad (\alpha_1, \alpha_2, \dots, \alpha_s), (\alpha_2, \alpha_3, \dots, \alpha_{s+1}), \dots \\ \dots (\alpha_x, \alpha_{x+1}, \dots, \alpha_{x+s-1})$$

Card 1/3

be a sequence of points of the s -dimensional unit cube. (1) is called completely uniformly distributed, if for every $s \geq 1$ the sequence of points (2) is uniformly distributed in the unit cube (see Korobov [Ref 1, 2]).

The Strong Law of Large Numbers for the Selection SOV/38-22-3-8/9
 From a Uniformly Distributed Random Variable

Let the random variable ξ have the distribution function $F(x)$:

$$F(x) = \begin{cases} 0 & \text{for } x \leq 0 \\ x & \text{for } 0 < x < 1 \\ 1 & \text{for } x \geq 1 \end{cases}$$

and thus be uniformly distributed on $[0,1]$.
 After an unlimited set of independent tests on ξ let the sequence

(3) $a : a_1, a_2, a_3, \dots$
 arise.

Theorem: With probability 1 the selection (3) is completely uniformly distributed.

If Q_1, Q_2, \dots is a sequence of points uniformly distributed in the s -dimensional unit cube and if there $f(x) = f(x_1, x_2, \dots, x_s)$ is an integrable function according to Riemann, then

$$\lim_{P \rightarrow \infty} \frac{\sum_{j=1}^P f(Q_j)}{P} = \int_0^1 \dots \int_0^1 f(x_1, \dots, x_s) dx_1 \dots dx_s$$

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The Strong Law of Large Numbers for the Selection
From a Uniformly Distributed Random Variable

SOV/38-22-3-8/9

The theorem formulated above may thus serve for the foundation
of the statistical method for the calculation of multiple
integrals.

There are 3 Soviet references.

PRESENTED: by I.M.Vinogradov, Academician

SUBMITTED: May 15, 1957

1. Integral equations 2. Functions--Theory

Card 3/3

AUTHOR: Postnikov A.G.

20-120-5-12/67

TITLE: Criterion for a Completely Uniformly Distributed Sequence
(Kriteriy dlya vpolne ravnomerno raspredelennoy posledovatel'nosti)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 5, pp 973-975 (USSR)

ABSTRACT: Let $\Delta_s = (\delta_1, \delta_2, \dots, \delta_s)$ denote a parallelepiped lying in the s-dimensional unit cube, which is defined by the fact that the i-th coordinate of its points belongs to the interval δ_i .Let $|\Delta_s|$ be the volume of Δ_s . Let α denote the sequence of numbers $\alpha_1, \alpha_2, \dots$ of the interval $[0,1]$. In a former paper [Ref 1] the author considered completely uniformly distributed sequences.

Now it is proved:

Theorem: Let the sequence α have the property that there exists a constant c so that for every $s \geq 1$ and every Δ_s it holds:

$$\lim_{P \rightarrow \infty} \frac{N_p(\Delta_s)}{P} < c |\Delta_s|.$$

Then α is completely uniformly distributed. The proof is based

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Criterion for a Completely Uniformly Distributed Sequence 20-120-5-12/67

on two lemmas which are completely proved as well as the theorem.
There are 2 Soviet references.

ASSOCIATION: Matematicheskiy institut imeni V.A.Steklova Akademii nauk SSSR
(Mathematical Institute imeni V.A.Steklov of the Academy of Sciences of the USSR)

PRESENTED: January 17, 1958, by I.M.Vinogradov, Academician

SUBMITTED: January 12, 1958

1. Parallellepipeds 2. Mathematics

Card 2/2

AUTHOR: Postnikov, A.G. SOV/20-123-3-6/54

TITLE: The Solution of the System of Difference Equations
Corresponding to the Dirichlet Problem With the Aid of a
Normal Sequence of Digits (Resheniye sistemy konechnoraz-
nostnykh uravneniy, sootvetstvuyushchey zadache Dirikhle,
s pomoshch'yu normal'noy posledovatel'nosti znakov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 3,
pp 407 - 409 (USSR)

ABSTRACT: Normal sequences of digits such as they have been constructed
by Champernowne [Ref 1] are used in order to solve the
system of linear equations to which the solution of the plane
Dirichlet problem leads. By means of a theorem on the con-
sidered sequences the author is able to make precise the
considerations of Feller [Ref 4] and thus to obtain an ex-
plicit expression for the solution of the Dirichlet problem.
There are 1 figure and 4 references, 1 of which is Soviet,
1 American, 1 English, and 1 German.

PRESENTED: September 26, 1958, by I.M. Vinogradov, Academician

Card 1/2

The Solution of the System of Difference
Equations Corresponding to the Dirichlet Problem With the Aid of a
Normal Sequence of Digits

SOV/20-123-3-6/54

SUBMITTED: September 25, 1958

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PHASE I BOOK EXPLOITATION

SOV/4500

Postnikov, A.G.

Arifmeticheskoye modelirovaniye sluchaynykh protsessov (Arithmetic Simulation of Random Processes) Moscow, Izd-vo AN SSSR, 1960. 83 p. (Series: Akademiya nauk SSSR. Matematicheskiy institut. Trudy, tom 57) Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskiy institut imeni V.A. Steklova.

Resp. Ed.: I.G. Petrovskiy, Academician; Deputy Resp. Ed.: S.M. Nikol'skiy, Professor; Ed. of Publishing House: L.K. Nikolayeva; Tech. Ed.: V.P. Karpov.

PURPOSE: This book is intended for mathematicians working on random processes and their arithmetic simulations.

COVERAGE: The author discusses problems of diophantine approximations of exponential functions. He cites studies of various authors and gives a systematic presentation of this material from his own point of view. In particular, he

Card 1/4

POSTNIKOV, A.G.

Very short exponential rational trigonometric sum. Dokl.
AN SSSR 133 no.6:1298-1299 Ag '60. (MIHA 13:8)

1. Matematicheskiy institut im. V.A.Steklova Akademii nauk
SSSR. Predstavлено акад. I.M. Vinogradovym.
(Function of real variables)

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342620010-2

LINNIK, I.V.; POSTNIKOV, A.G.

Ivan Matveevich Vinogradov, Analele mat 17 no.2:173-185
Ap-Je '63.

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342620010-2"

LINNIK, Yu.V.; POSTNIKOV, A.G.

Ivan Matveevich Vinogradov; on his 70th birthday. Usp.mat.nauk
17 no.2:201-214 Mr-Ap '62. (MIRA 15:12)
(Vinogradov, Ivan Matveevich, 1891-)

POSTNIKOV, A.G.

Ivan Matveevich Vinogradov; on his 70th birthday. Izv. AN
(MIRA 14:10)
SSSR. Ser. mat. 25 no.5:621-628 S-0 '61.
(Vinogradov, Ivan Matveevich, 1891-)

34558
S/044/62/000/001/003/061
C111/C444

16.6100

AUTHOR:

Postnikov, A. G.

TITLE:

The arithmetic modelling of random processes

PERIODICAL:

Referativnyy zhurnal, Matematika, no. 1, 1962, 19,
abstract 1A121. (Tr. Matem. in-ta. ANSSSR, 1960, 57, 845;
illustrated)

TEXT: In the introduction examples are given from the theory of diophantic approximations with the exponential function. One introduces the terms of normal sign sequence and caterpillar. Described are examples of normal sign sequences, criteria of normality, and the construction of a sequence, compatibly normal to a given sequence. Conception and construction of a sign sequence, normal according to Bernoulli, are given; one constructs examples and discusses them. One describes theorems of N. M. Korobov and connected with them theorems on completely uniform distributed sign sequences. Described are the elements of the theory of dynamic systems in the space of the sign sequences; the proof of F. Riesz of the theorem of Birkhoff-Khinchin(modification of the well-known proof of A. N. Kolmogorov) is given. One uses the theorem of Birkhoff-Khinchin in order to prove the criterium for the normality of a sign sequence. Considered are

Card 1/2

POSTNIKOV, A.G.

Number of hits of fractional parts of an exponential function
in a given interval. Usp.mat.nauk 16 no.3:201-205 My-Je '61.
(MIRA 14:8)

(Functions, Exponential)

16.1000

86374

S/020/60/133/006/023/031XX
C 111/ C 333

AUTHOR: Postnikov, A. G.

TITLE: On a Very Short Exponential Rational Trigonometric Sum

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 6,
pp. 1298-1299TEXT: Let $g \geq 2$ be a natural number, p a prime number, $h = h(p)$
an integer-valued function; $h \rightarrow \infty$ with $p \rightarrow \infty$

$$h(p) \leq \frac{1}{2} \frac{\log p}{\log g}; \lambda = \text{const} > 0.$$

Let $N_p(\lambda)$ be the number of the integers a , $0 \leq a \leq p - 1$, for which

$$\left| \sum_{x=0}^h \exp \left[2 \pi i \frac{ax}{p} \right] \right| < \lambda \sqrt{h} \quad \text{Theorem: } \lim_{p \rightarrow \infty} \frac{N_p(\lambda)}{p} = 1 - e^{-\lambda^2}.$$

The proof of the theorem is obtained by applying the moment method
of A. A. Markov similarly as in the paper of M. P. Mineyev (Ref.1).
For fixed p the author considers the random variable ξ_p which

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On a Very Short Exponential Rational Trigonometric Sum

attains the values

$$\frac{1}{h} \left| \sum_{x=0}^h \exp \left[2\pi i \frac{ag^x}{p} \right] \right|^2$$

with the probability $1/p$. The distribution function of this variable is $N_p(\lambda^2)/p$. One calculates the r -th moment of this function and states that it is equal to the number $M_r(p)$ of the solutions of

$$(2) \quad g^{x_1} + \dots + g^{x_r} = g^{y_1} + \dots + g^{y_r}$$

in the numbers $0 \leq x_i; y_i \leq h$. Since $M_r(p) = r!h^2 + O(h^{r-1})$, it is

$$\lim_{p \rightarrow \infty} \frac{1}{p} \sum_{a=0}^{p-1} \frac{1}{h^r} \left| \sum_{x=0}^h \exp \left[2\pi i \frac{ag^x}{p} \right] \right|^{2r} = r!$$

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On a Very Short Exponential Rational Trigonometric Sum
The theorem follows by applying the second limit theorem (as in
(Ref.1)).

There are 4 references: 3 Soviet and 1 American.

ASSOCIATION: Matematicheskiy institut imeni V. A. Steklova Akademii
nauk SSSR (Mathematical Institute imeni V. A. Steklov
of the Academy of Sciences USSR)

PRESENTED: April 15, 1960, by J. M. Vinogradov, Academician

SUBMITTED: April 14, 1960

Card 3/3

POSTNIKOV, Aleksandr Konstantinovich; STEPANOV, Anatoliy Alekseyevich;
PIMENOV, Ivan Ivanovich; SHARIKOV, I.M., retsenzent; SEGAL', N.M.,
redaktor; MEDVEDEVVA, L.A., tekhnicheskiy redaktor

[OPL-2 wringing and rinsing machine for retted flax] Otzhimno-
promyvnaia mashina OPL-2 dlia l'nianoi tretty. Moskva, Gos.nauchno-
tekhn.izd-vo M-va legkoi promyshl. SSSR, 1957. 33 p. (MLRA 10:9)
(Flax)